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## **Efficacy of Single and Mixed Treatments of *Trichoderma harzianum* as Biocontrol Agents of *Ganoderma* Basal Stem Rot in Oil Palm<sup>o</sup>**

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### **ABSTRACT**

Two *Trichoderma harzianum* strains (FA 1132 and FA 1166) were tested as biocontrol agents for basal stem rot in oil palm seedlings artificially infected with the causal pathogen, *Ganoderma boninense*. The treatment was carried out by applying a *Trichoderma*-infused surface mulch and periodic applications of a conidial soil drench made from spore suspensions of the respective *Trichoderma* strains. A disease severity index (DSI) ranging from 0 to 100 was used to assess the disease severity. A single strain application of *T. harzianum*, FA 1132 gave the best disease suppression with the lowest DSI of 28.35 compared to the infected, non-treated control plants that gave the highest DSI of 86.67. However, FA 1166 as a single application was ineffective, so was the mixture of the two strains. The biological control property of *Trichoderma* was shown to be strain-specific and not species-specific. In addition, it was found that applying the mixed inocula significantly decreased the performance of FA 1132, the choice strain.

**Keywords:** oil palm, basal stem rot, *Trichoderma harzianum*, *Ganoderma boninense*.

